

MULTIHOP, MULTI-CHANNEL, WIRELESS COMMUNICATION NETWORK
WITH SCHEDULED TIME SLOTS

ABSTRACT OF THE DISCLOSURE

5 A wireless local area network (20) includes a hub access
point node (22), any number of active nodes (24) and any number
of inactive nodes (26). Some of the active nodes (24) act as
forwarding nodes (32) so that the coverage area of the network
10 (20) is extended beyond the radio range of the hub access point
node (22). Time slots (42) are consecutively scheduled for the
active nodes (24) along outward communication paths (34) and
inward communication paths (36). Beginning time slots (42) for
the inward communication paths (36) are assigned to outermost
nodes (38) in the paths (36). Beginning time slots (42) for
15 the outward communication paths (34) are assigned to the hub
access point node (22). Time slots (42) are assigned in a
manner that minimizes total latency (44). Time slots (42) are
also assign to afford opportunities for the inactive nodes (26)
to communicate.

FIG. 1